



PUBLIC HEALTH

**ALWAYS WORKING FOR A SAFER AND
HEALTHIER WASHINGTON**

Investing in the Public's Health

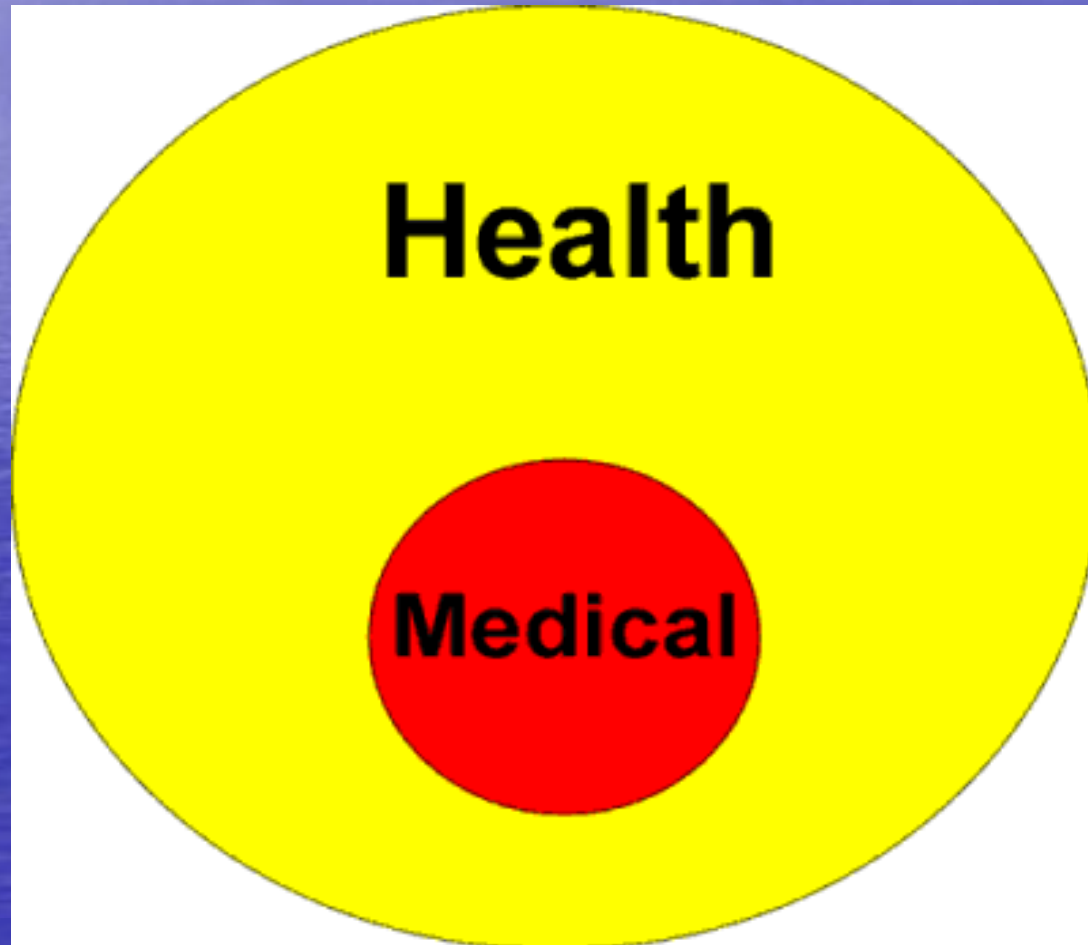
Maxine Hayes, MD, MPH
State Health Officer
Washington State Department of Health
June 22, 2007

Public Health Works!

- "Assuring the health of the nation"
- Examples from the 20th century

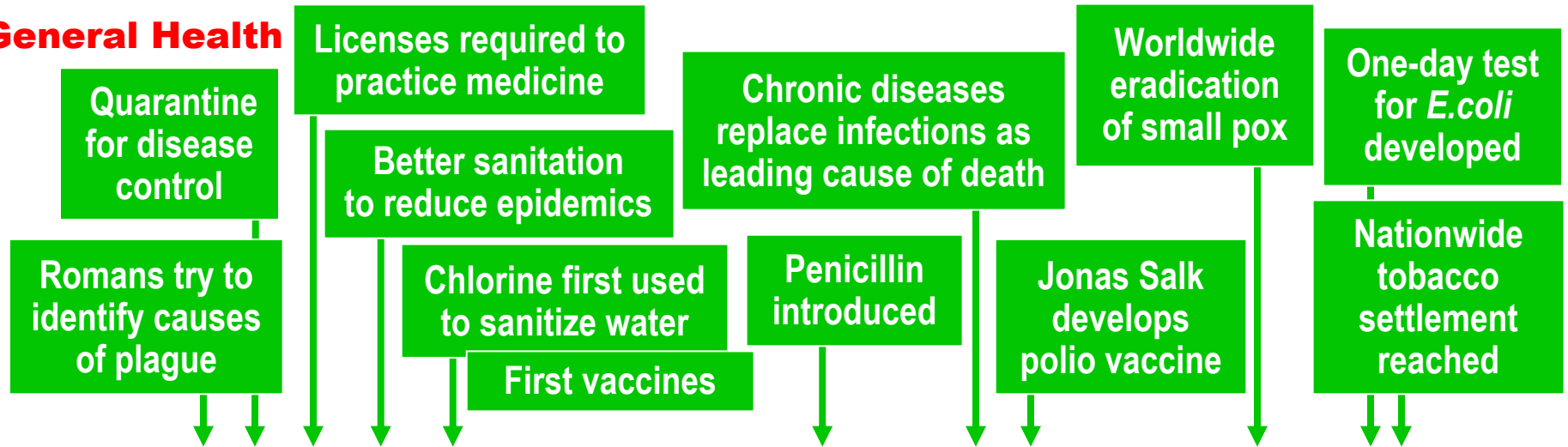
Role of Public Health vs. Medicine

“Health”

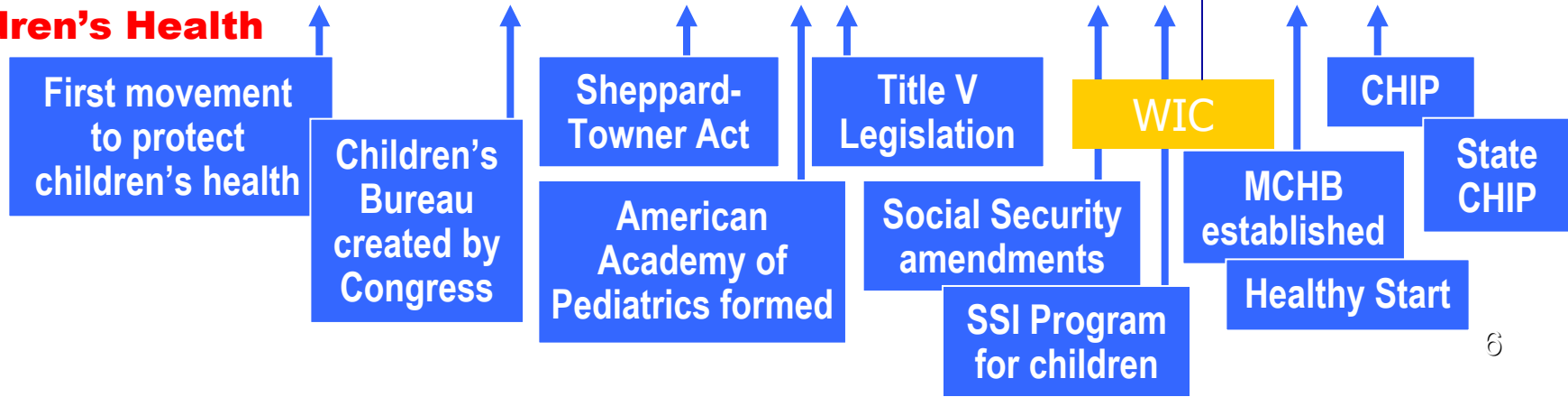


We've Made Great Strides in Medicine and Policy

General Health



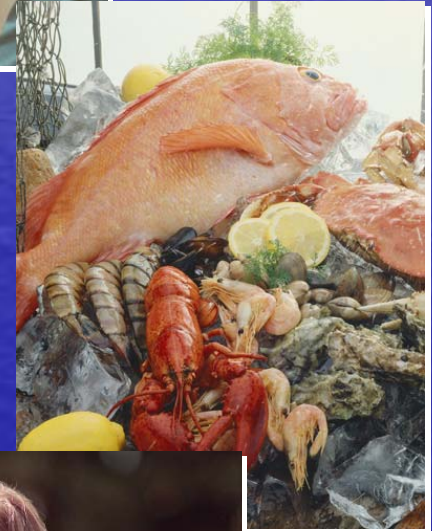
Children's Health



Ten Great Achievements in Public Health

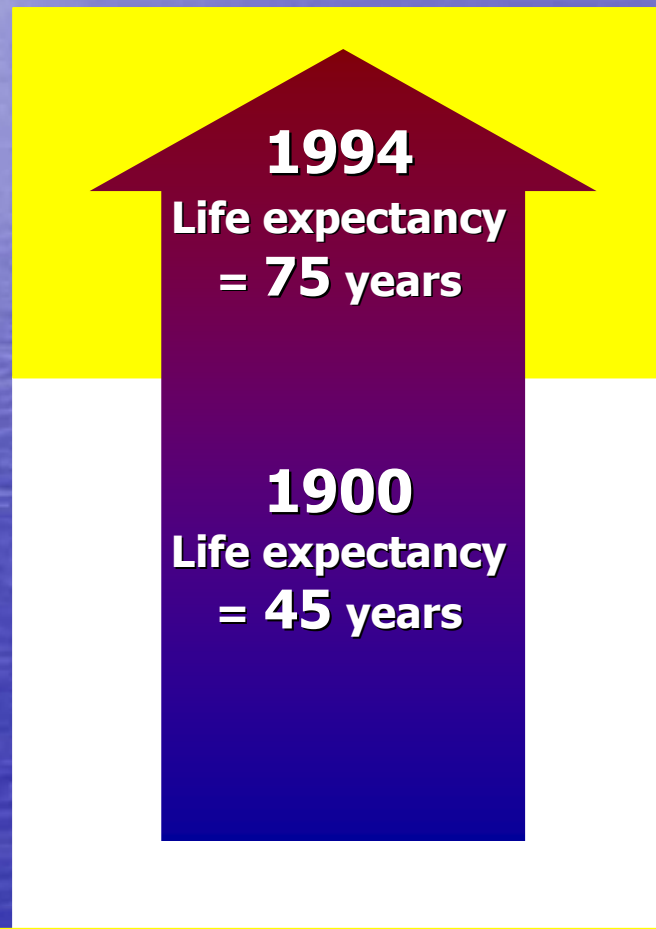
U.S. 1900-99

- Vaccination
- Motor-vehicle safety
- Safer workplaces
- Control of infectious diseases
- Decline in deaths from coronary heart disease and stroke
- Safer and healthier foods
- Healthier mothers and babies
- Family planning
- Fluoridation of drinking water
- Recognition of tobacco use as a health hazard



SOURCE: Morbidity and Mortality Weekly Report, December 24, 1999.

Our Life Span Has Increased By 30 Years Since 1900*



25 of these years
are due to
advances in public
health

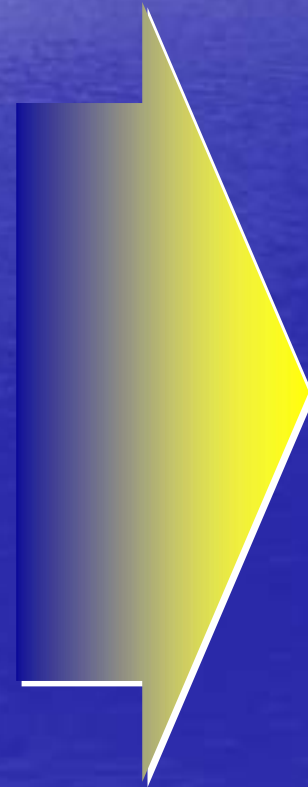
*United States



Where Are We Today?

21st Century Challenges and Major Implications for Health and Health Care

Population growth
Aging of the population
Environmental pressures
Infectious disease
Poverty, disparities
Global disasters
Unhealthy lifestyles
Tighter budgets



These challenges will put more pressure on the health care system and our responsibility to prevent disease and maintain standards for safe, quality care when it is needed

Health Status Indicators

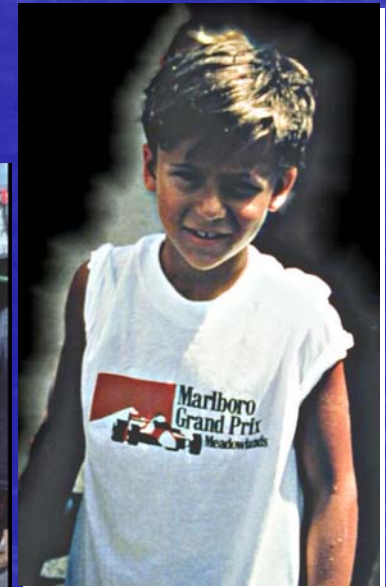
Where We're Doing Well:

- Higher infant survival rate
- Improved birth weights
- Life expectancy of 76.1 years
- Fewer infection, injury deaths
- More children immunized
- Better nutrition
- Improved access to insurance



Where We Need To Improve:

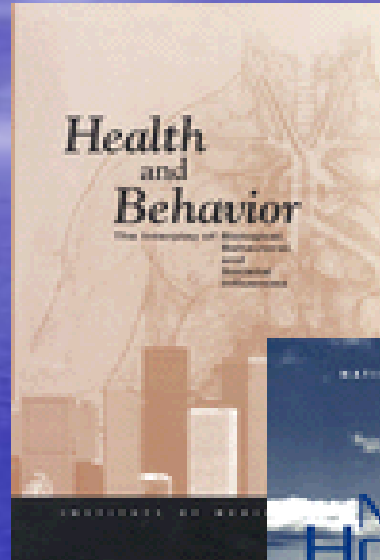
- Unintended pregnancies
- Chronic disease
- Mental health
- Tobacco, substance abuse
- Disparities – social, race, ethnic, geographic, health, economic
- Physical Activity
- Nutrition



We Know What Determines Health



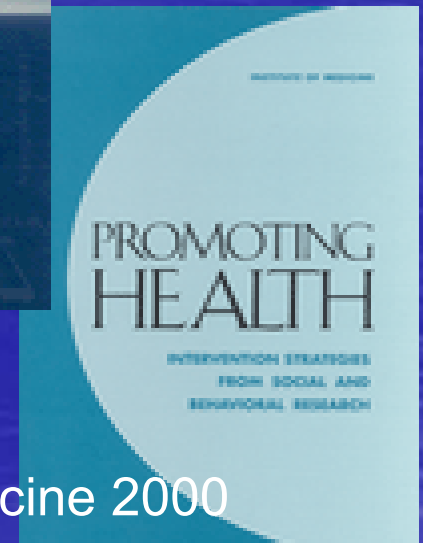
National Institutes of Health 2000



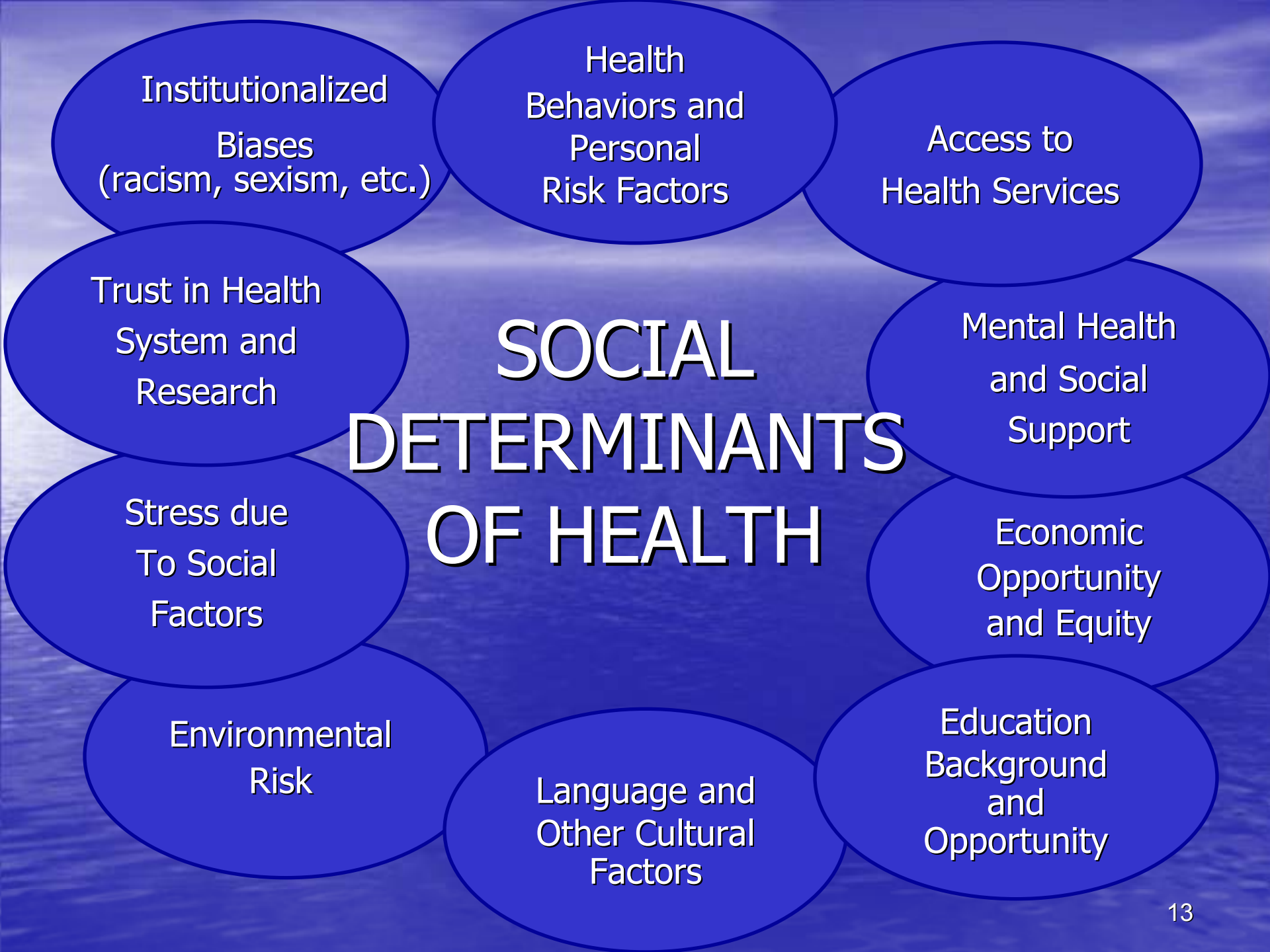
Institute of Medicine 2001



National Research Council 2001



Institute of Medicine 2000



Determinants of Health

Multiple levels of influence

HEALTH

Access to Health Care – 10%

Environment – 20%

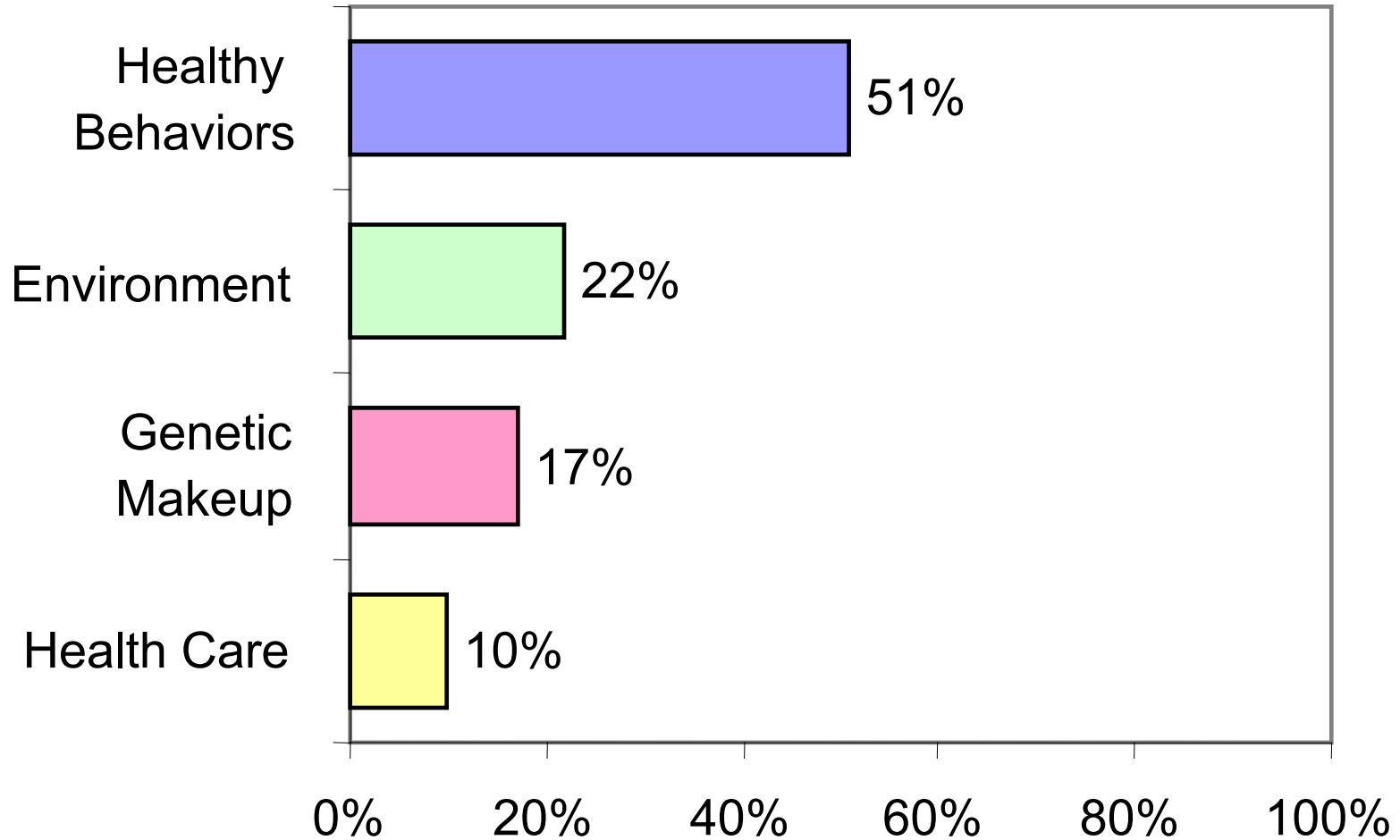
Genetics – 20%

Healthy Behaviors – 50%

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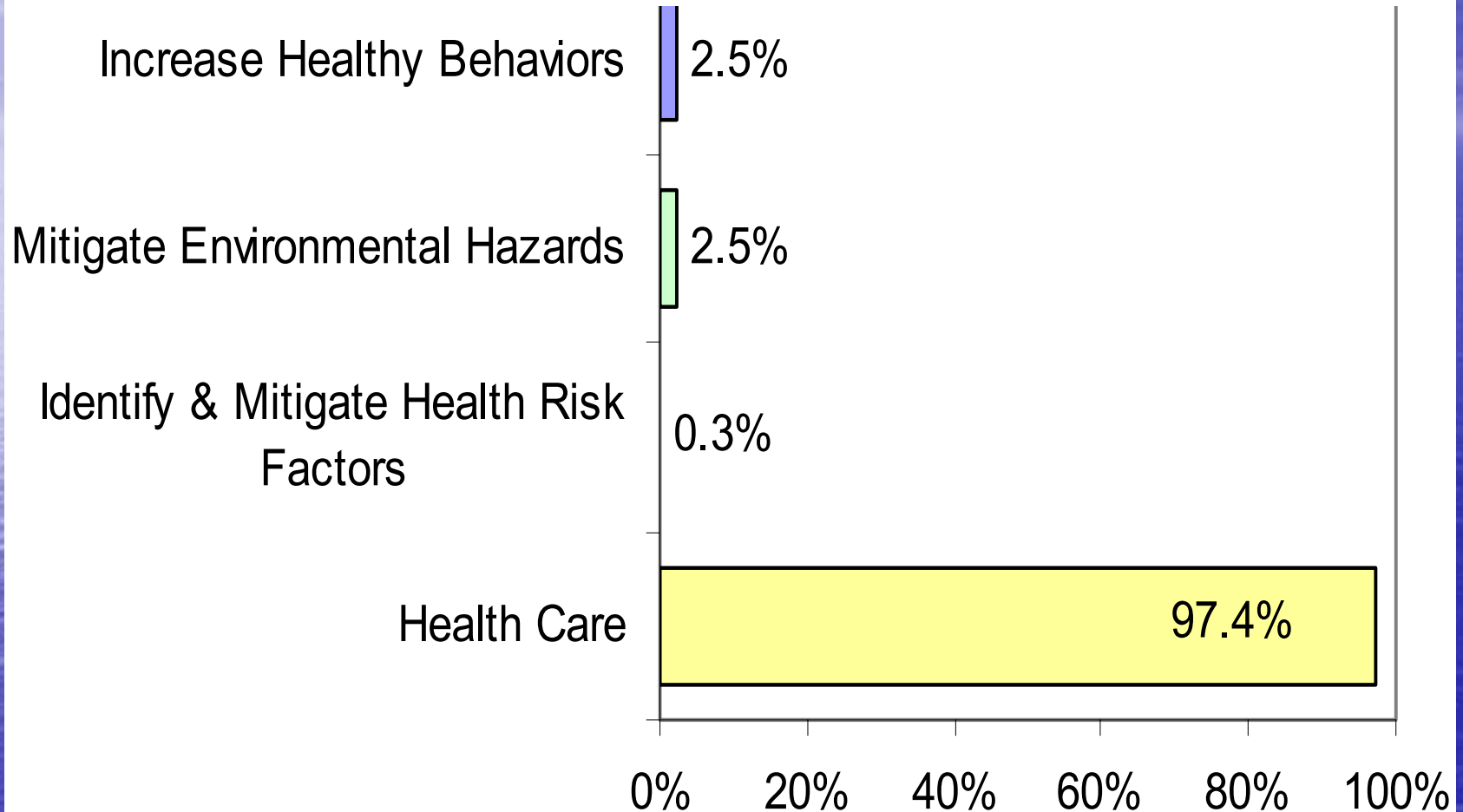
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What Influences Our Health



Source: McGinnis, et. al, 2002

How We Spend Our Money



Source: Priorities of Government II, Summer 2004



Costs of Chronic Diseases

“Chronic disease is now the principal cause of disability and use of health services and consumes 78% of health expenditures.” JAMA, Sept. 1, 2004

Chronic Diseases

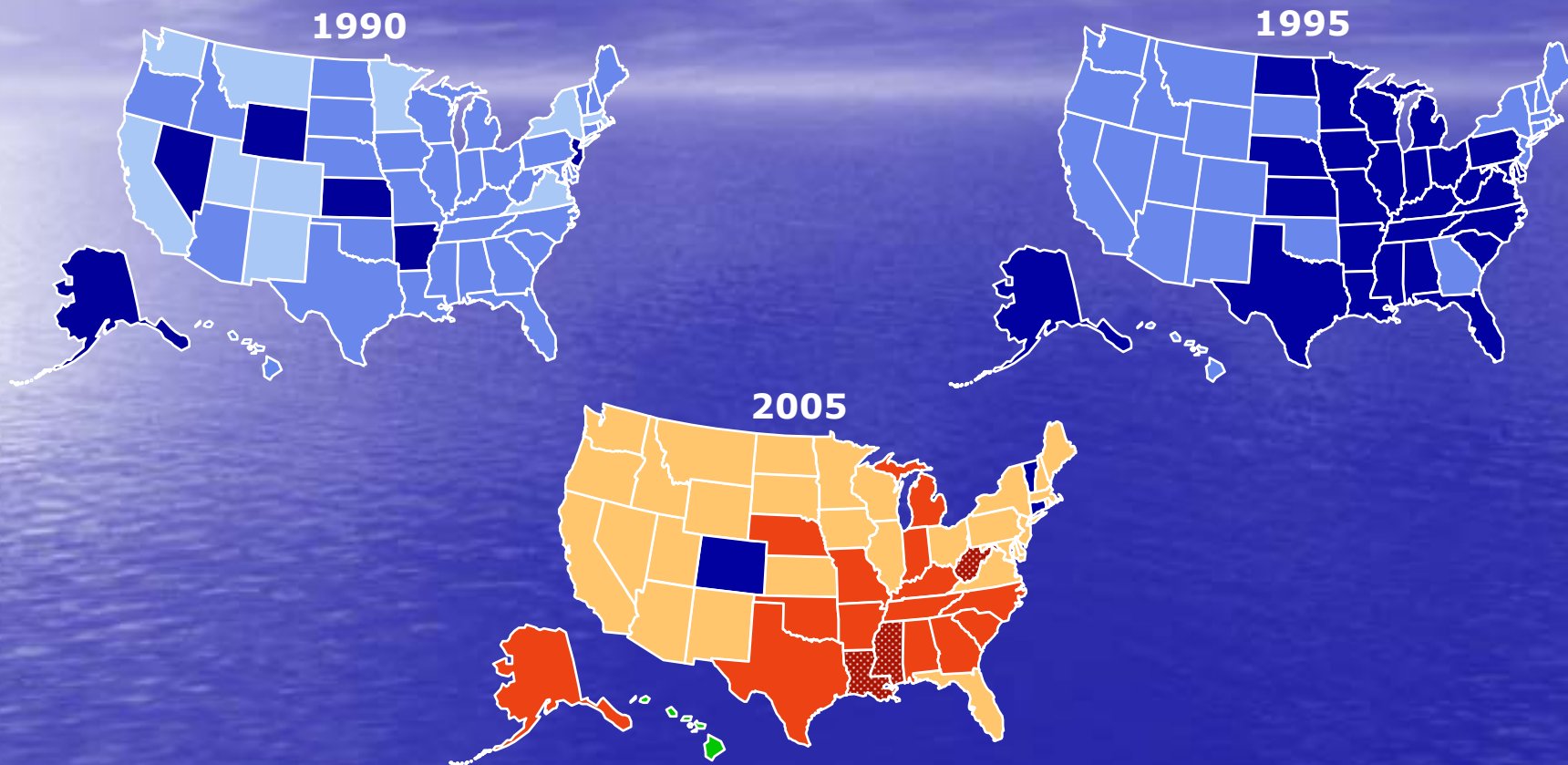
Many chronic diseases and their debilitating and costly effects can be prevented, delayed or lessened if people adopt healthy behaviors such as:

- *Eating a healthy diet*
- *Exercising regularly*
- *Refraining from tobacco use and excessive alcohol use*

Obesity Trends* Among U.S. Adults

BRFSS, 1990, 1995, 2005

(*BMI ≥ 30 , or about 30 lbs overweight for 5'4" person)



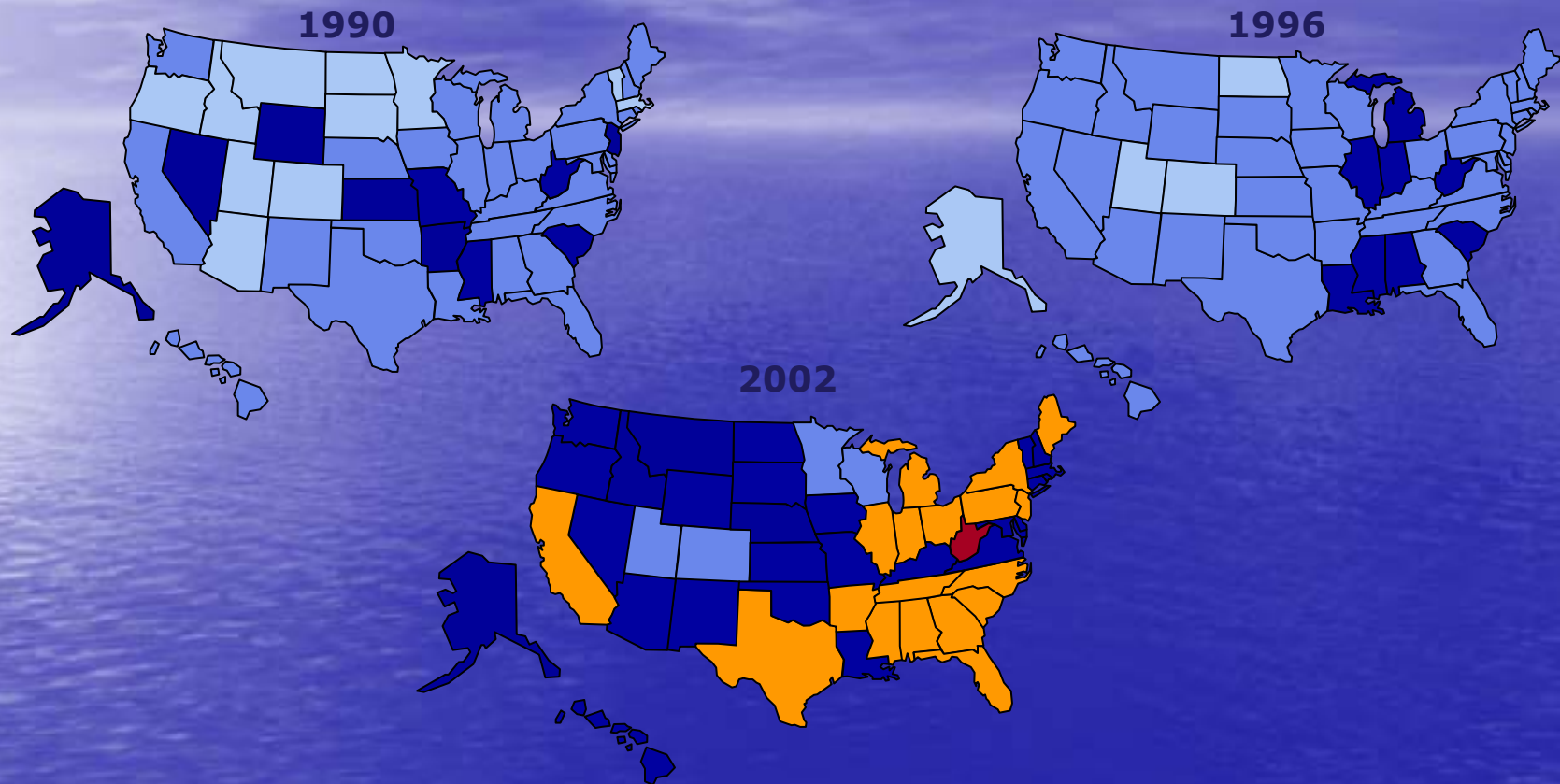
Costs of Obesity-Related Conditions

Obesity increases the risk for heart disease, stroke, high blood pressure, diabetes and cancer.

*The estimated cost to Medicaid for obesity-related conditions was \$21 Billion in 2003, ranging from:
\$23 million in Wyoming to
\$3.5 billion in New York*

(source: Centers for Disease Control and Prevention, Jan. 2004)

Diabetes* Trends Among U.S. Adults, BRFSS 1990, 1996, and 2002



*Includes Gestational Diabetes

Source: Behavioral Risk Factor Surveillance System, CDC

Examples of Public Health Investments and Known Savings

WIC* is primary prevention by design:

Research has shown that WIC:

- Reduces premature births and low birthweight
- Lowers infant mortality
- Prevents childhood anemia
- Improves cognitive development
- Increases breastfeeding rates
- Reduces risks for childhood obesity and diabetes



Cost of a Normal Healthy Birth in Washington

The average cost for a normal newborn for
2004 was \$1,549



Low Birthweight Baby:

Average hospital cost 2004*

Low birthweight
\$37,543

2,773 births



*DOH, Center for Health Statistics

Very low birthweight births:

Total cost for 2004*
(Less than 3 lbs or 1,500 grams)

\$171,751,297

960 babies

Almost \$172 million



*DOH, Center for Health Statistics 27

Breastfeeding Lowers Health Risks and Reduces Costs

Babies who are not breastfed have higher rates of:

- Infections
- Asthma
- Allergies
- Diabetes
- Childhood obesity
- SIDS



For every 1,000 babies who are not breastfed, there are:

- 2,033 excess medical office visits
- 212 excess days of hospitalization
- 609 excess prescriptions

Source: *Pediatrics* (Suppl.) 1999; 103 (4): 870-876



Nationally a minimum of \$3.6 billion in medical expenses could be saved each year if:

The number of children breastfed for at least six months was increased to 50% as recommended by the US Surgeon General

Breastfeeding Rates in the U.S., 2003

	U.S. Total	Mothers < age 20	African American
% of mothers who began to breastfeed at birth	70.9	54.5	51.1
% of babies exclusively breastfed up to 6 months	14.2	14.9	21.9

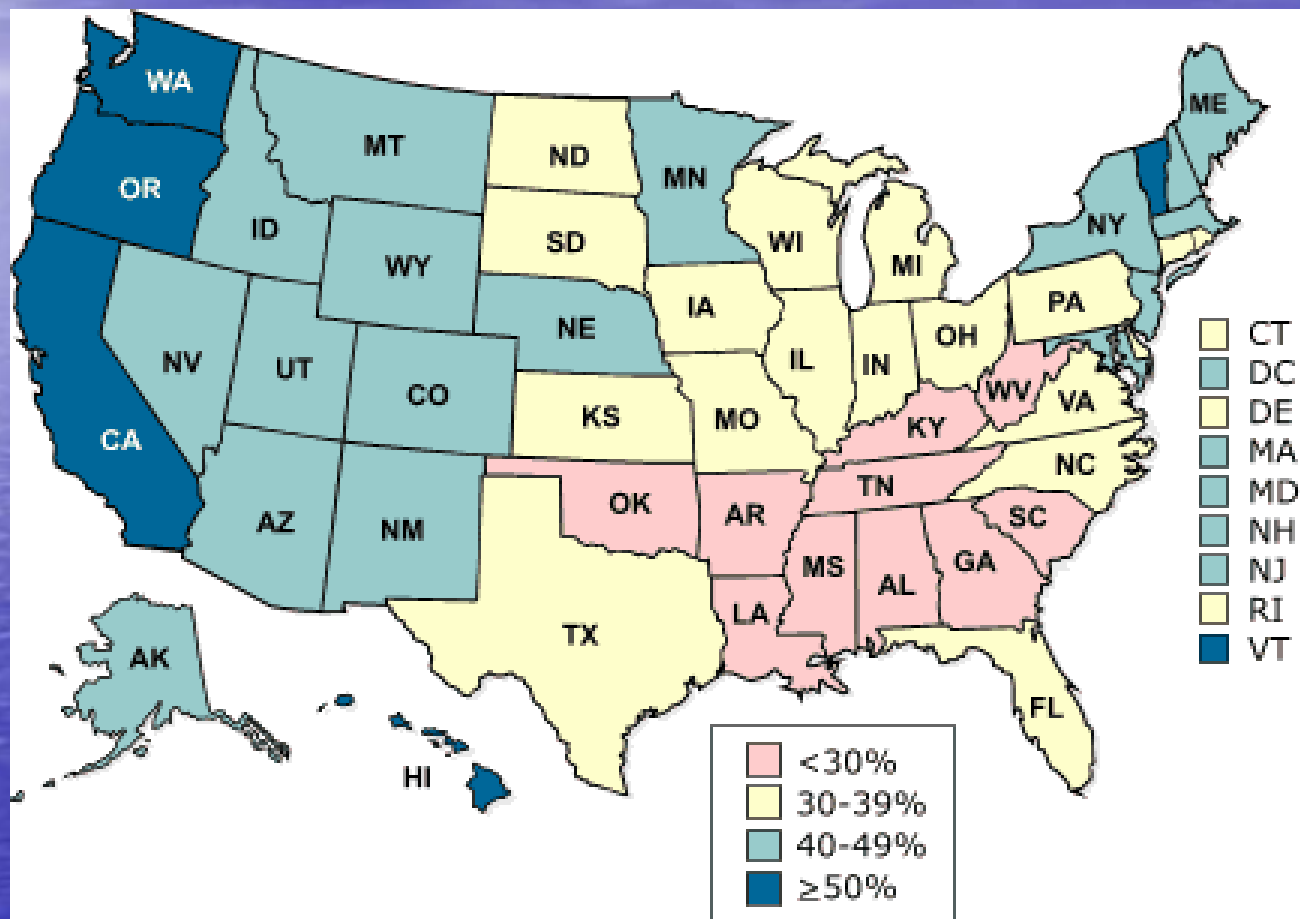
Source: U.S. Department of Health and Human Services, Health Resources and Services Administration. *Women's Health*

USA 2005. Rockville, Maryland: U.S. Department of Health and Human Services, 2005.

State Births and Breastfeeding

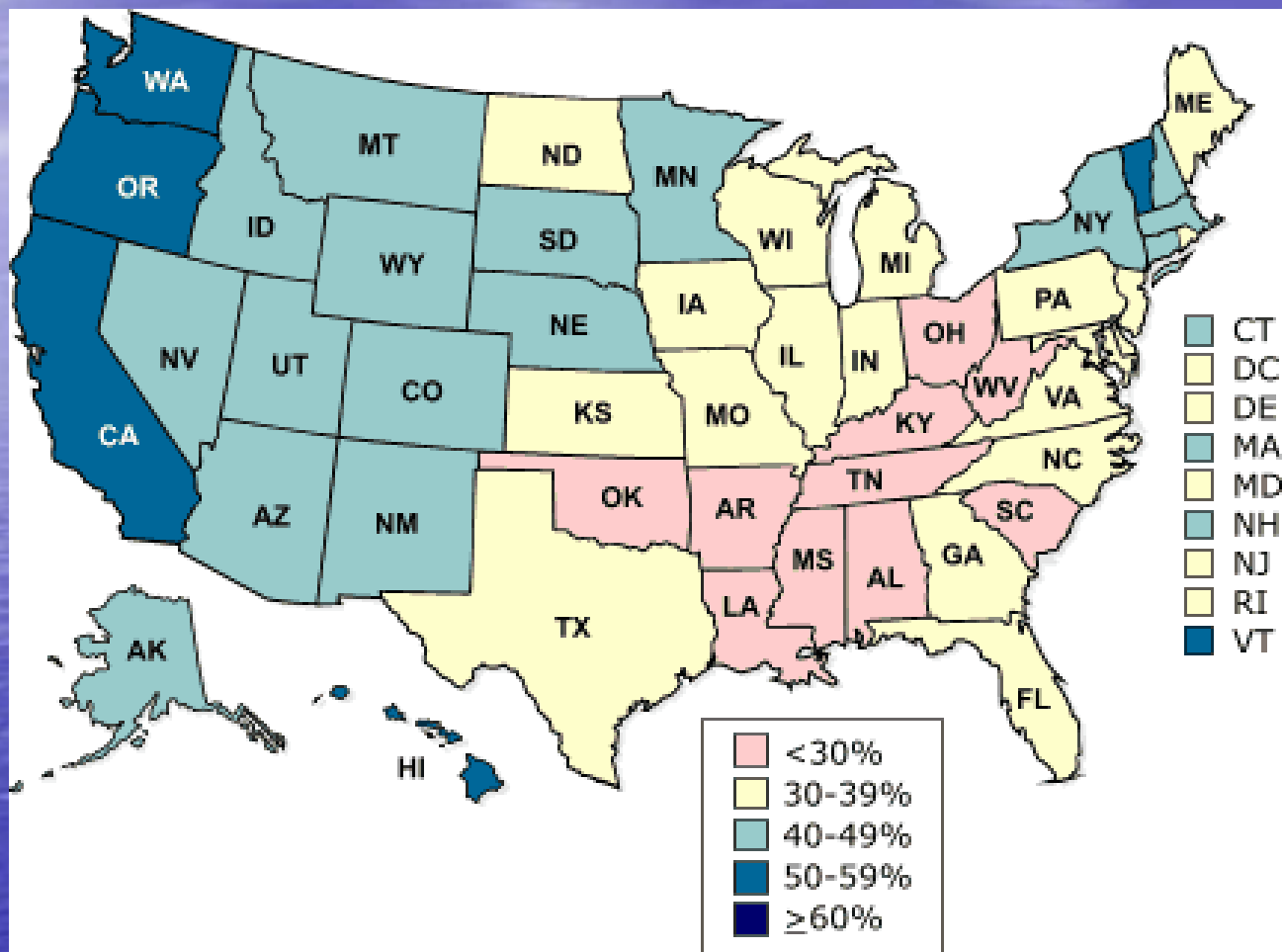
State	# of births, 2004	Medicaid births, 2002	Babies exclusively breastfed at 3 months (2005)
ID	22,532	38%	51.6%
IA	38,438	25%	32.5%
MS	42,827	56%	18.3%
NH	14,565	21%	46%
VA	103,933	31%	42.3%
WV	20,880	50%	22.2%

Percentage of Children Breastfed at 6 Months of Age by State, 2005



Source: 2005 National Immunization Survey, Centers for Disease Control and Prevention, Department of Health and Human Services

Percent of Children Exclusively Breastfed Through 3 Months of Age, 2005



Source: 2005 National Immunization Survey, Centers for Disease Control and Prevention, Department of Health and Human Services

Comparison of 20th Century Annual Morbidity and Current Morbidity, Vaccine-Preventable Diseases (pre-1990 Vaccines)

Disease	20th Century Annual Morbidity [†]	2004*	Percent Decrease
Smallpox	48,164	0	100%
Diphtheria	175,885	0	100%
Measles	503,282	37	99.99%
Mumps	152,209	236	99.84%
Pertussis (whooping cough)	147,271	18,957	87.13%
Polio (paralytic)	16,316	0	100%
Rubella	47,745	12	99.97%
Congenital Rubella Syndrome	823	0	100%
Tetanus	1,314	27	97.95%

[†] Source: CDC. *MMWR* April 2, 1999. 48: 242-264

* Provisional 2004 Data

Numbers in white indicate at or near record lows in 2004

Vaccines are Highly Cost Effective

For every \$1 spent*:

- DTaP** saves. \$27.00
- MMR (measles, mumps, rubella) saves . . . \$26.00
- Perinatal Hep B saves \$14.70
- Varicella (chicken pox) saves \$ 5.40
- Inactivated Polio (IPV) saves. . . \$ 5.45

*direct and indirect savings
(including work loss, death, and disability)
**Diphtheria, tetanus, pertussis (whooping cough)

Tobacco Cessation Effectiveness

- USPSTF:* Tobacco cessation highest prevention priorities ranking
- Tobacco cessation more cost-effective than other disease prevention interventions (e.g., high blood pressure, high cholesterol)
- Short-term and long-term return-on-investment (ROI)

*U.S. Preventive Services Task Force

Dental Treatment and Fluoridation Costs

- In 2004, \$78 billion spent on dental services
- \$1 invested in water fluoridation leads to \$38 in avoided costs for dental treatment
- National average for one amalgam filling is \$65 – the approximate cost of providing fluoridation to an individual for a lifetime

Public Health's Mission After 9/11/01

Assuring the Health and
Safety of the Nation

Add to List of Investments

- Emergency preparedness
- Pandemic influenza and other emerging threats

To Review. . .

- We've made progress
 - We're living longer
 - Health indicators and health system have improved
- Some things could be better
 - Too many preventable deaths
 - Access to preventive services
 - Benefits and improvements are not equal
 - Decrease burden of chronic disease

To Review. . . (cont'd)

- Threats remain
 - Population growth, environmental pressures
 - Poverty, unemployment, violence
 - Drug-resistant diseases, new diseases
 - Global disasters
 - Pandemic flu
- We have challenges
 - Increase investments in prevention
 - Overcome disparities
 - Overcome threats, manmade, natural

State Legislative Roles in Public Health

Enact policies, provide oversight and funding. Examples:

- Immunization requirements
- Healthy lifestyle issues (P.E., school nutrition requirements)
- Medicaid, state employee & private pay insurance incentives or requirements for service coverage (requiring or rewarding actions, such as providing appropriate prenatal care, immunizations, cancer screenings, wellness incentives, etc.)
- Investing in WIC/breastfeeding promotion
- Injury prevention initiatives (seat belt, car seat use)
- Smoking restrictions
- Safe water & air standards
- Emergency preparedness provisions & requirements

If nothing changes, the children growing up today will be the first generation in America to not live as long as their parents!

Source: "A Potential Decline in Life Expectancy in the United States in the 21st Century." Olshansky et al NEJM 352:11 March 17, 2005



What Will Our Legacy Be?